VULCANISATES OF LIQUID RUBBER WITH SIMILAR MECHANICAL PROPERTIES AS CONVENTIONAL RUBBERS

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A liquid form of NR, obtained by means of solar radiation was studied with a view to obtain vulcanisates of similar mechanical properties as conventional sulphur system with a peroxide-accelerator combination as a co-curing agent.

The ultimate tensile strength of the vulcanisates showed an optimum with change in peroxide concentration. The maximum tensile strength recorded was quite close to that obtained with a conventional solid rubber, cured with a standard sulphur system under identical conditions. The maximum in tensile strength was obtained when the cross link density was 3.75×10^{-5} mol/gm of rubber. Modulus at 100% extension increased as the cross link deniity increased. Maximum modulus was obtained when the cure time was 45 minutes in contrast to the tensile strength, the maximum of which was recorded when the cure time was 30 minutes.